CLAIM AMENDMENTS

Claim 1 (Currently Amended)

A UV ray curable ink comprising

a pigment,

a polymerizable compound, ~~and~~

a photopolymerization initiator, and

a polymer dispersant,

wherein the UV ray curable ink has an absolute value of a viscosity difference between a viscosity at 25 °C at shear rate 10 (1/s) and a viscosity at 25 °C at shear rate 1000 (1/s) being not more than 5 mPa·s, and has a surface tension at 25 °C of from 26 to 38 mN/m.

Claim 2 (Original)

The UV ray curable ink of claim 1, wherein the absolute value of a viscosity difference in viscosity at 25 °C at shear rate 10 (1/s) between the ink and the polymerizable compound is not more than 10 mPa·s.

Claim 3 (Original)

The UV ray curable ink of claim 1, wherein the absolute value of a viscosity difference between a viscosity at 25 °C at shear rate 10 (1/s) and a viscosity at 25 °C at shear rate 1000 (1/s) is not more than 2 mPa·s.

Claim 4 (Original)

The UV ray curable ink of claim 1, wherein the surface tension at 25 °C is from 28 to 35 mN/m.

Claim 5 (Original)

The UV ray curable ink of claim 2, wherein the absolute value of a viscosity difference in viscosity at 25 °C at shear rate 10 (1/s) between the ink and the polymerizable compound is not more than 5 mPa·s.

Claim 6 (Original)

The UV ray curable ink of claim 1, wherein the polymerizable compound is a cation polymerizable compound.

Claim 7 (Currently Amended)

The UV ray curable ink of claim 6, wherein the cation polymerizable compound is comprised of an oxetane compound and at least one of either an epoxy compound ~~and~~ or a vinyl ether compound.

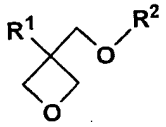
Claim 8 (Original)

The UV ray curable ink of claim 7, wherein the oxetane compound has from one to four oxetane rings in the molecule.

Claim 9 (Original)

The UV ray curable ink of claim 8, wherein the oxetane compound having one oxetane ring in the molecule is a compound represented by the following formula 1,

Formula 1

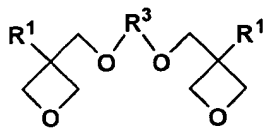


wherein R^1 represents a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms, a fluoroalkyl group having from 1 to 6 carbon atoms, an allyl group, an aryl group, a furyl group or a thienyl group; and R^2 represents an alkyl group having from 1 to 6 carbon atoms, an alkenyl group having from 2 to 6 carbon atoms, an aromatic ring-containing group, an alkylcarbonyl group having from 2 to 6 carbon atoms, an alkoxycarbonyl group having from 2 to 6 carbon carbons, or an N-alkylcarbamoyl group having from 2 to 6 carbon atoms.

Claim 10 (Original)

The UV ray curable ink of claim 8, wherein the oxetane compound having two oxetane rings in the molecule is a compound represented by the following formula 2,

Formula 2

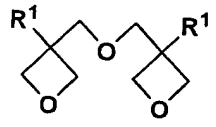


wherein R^1 represents a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms, a fluoroalkyl group having from 1 to 6 carbon atoms, an allyl group, an aryl group, a furyl group or a thienyl group; and R^3 represents a straight chained or branched alkylene group, a straight chained or branched polyalkyleneoxy group, a straight chained or branched divalent unsaturated hydrocarbon group, an alkylene group containing a carbonyl group, an alkylene group containing a carbonyloxy group, or an alkylene group containing a carbamoyl group.

Claim 11 (Original)

The UV ray curable ink of claim 8, wherein the oxetane compound having two oxetane rings in the molecule is a compound represented by the following formula 7,

Formula 7

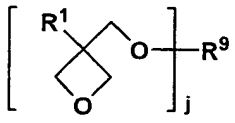


wherein R^1 represents a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms, a fluoroalkyl group having from 1 to 6 carbon atoms, an allyl group, an aryl group, a furyl group or a thienyl group.

Claim 12 (Original)

The UV ray curable ink of claim 8, wherein the oxetane compound having tree or four oxetane rings in the molecule is a compound represented by the following formula 8,

Formula 8

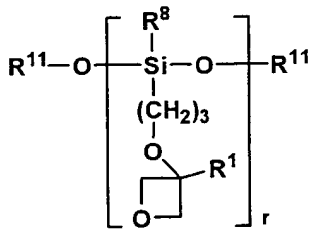


wherein R^1 represents a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms, a fluoroalkyl group having from 1 to 6 carbon atoms, an allyl group, an aryl group, a furyl group or a thienyl group; R^9 represents a branched alkylene group having 1 to 12 carbon atoms, a branched polyalkyleneoxy group, or a branched alkylene group containing a silylether group; and j represents an integer of 3 or 4.

Claim 13 (Original)

The UV ray curable ink of claim 8, wherein the oxetane compound having from one to four oxetane rings in the molecule is a compound represented by the following formula 9,

Formula 9



wherein R^1 represents a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms, a fluoroalkyl group having from 1 to 6 carbon atoms, an allyl group, an aryl group, a furyl group or a thienyl group; R^8 represents an alkyl group

having from 1 to 4 carbon atoms or an aryl group; R.sup.11 represents an alkyl group having 1 to 4 carbon atoms or a trialkylsilyl group; and r represents an integer of from 1 to 4.

Claim 14 (Original)

The UV ray curable ink of claim 6, wherein the cation polymerizable compound content of the ink is from 1 to 97% by weight based on the weight of the ink.

Claim 15 (Original)

The UV ray curable ink of claim 14, wherein the cation polymerizable compound content of the ink is from 30 to 95% by weight based on the weight of the ink.

Claim 16 (Original)

The UV ray curable ink of claim 1, wherein the polymerizable compound is a radical polymerizable compound.

Claim 17 (Original)

The UV ray curable ink of claim 16, wherein the radical polymerizable compound content of the ink is from 1 to 97% by weight based on the weight of the ink.

Claim 18 (Original)

The UV ray curable ink of claim 17, wherein the radical polymerizable compound content of the ink is from 30 to 95% by weight based on the weight of the ink.

Claim 19 (Original)

An image formation method comprising the steps of

ejecting the UV ray curable ink of claim 1 as ink droplets onto recording material,

employing on-demand type ink jet nozzles; and

irradiating UV rays to the ink ejected on the recording material to form an image,

wherein the ink droplets comprise two or more separate droplets with a different volume.

Claim 20 (Original)

The image formation method of claim 19, wherein the minimum volume of the ink droplets is less than 10 pl.